(19)

(11) Publication number: **2002273741 A**

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PATENT ABSTRACTS OF JAPAN

(21) Application number: **2001074244**

(51) Intl. Cl.: **B29C 39/02** B82B 1/00 B82B 3/00 C08J 5/00 C08K 3/04 C08L101/00

(22) Application date: **15.03.01**

(30) Priority:

(43) Date of application publication: **25.09.02**

(84) Designated contracting states:

(71) Applicant: **POLYMATECH CO LTD**
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(74) Representative:

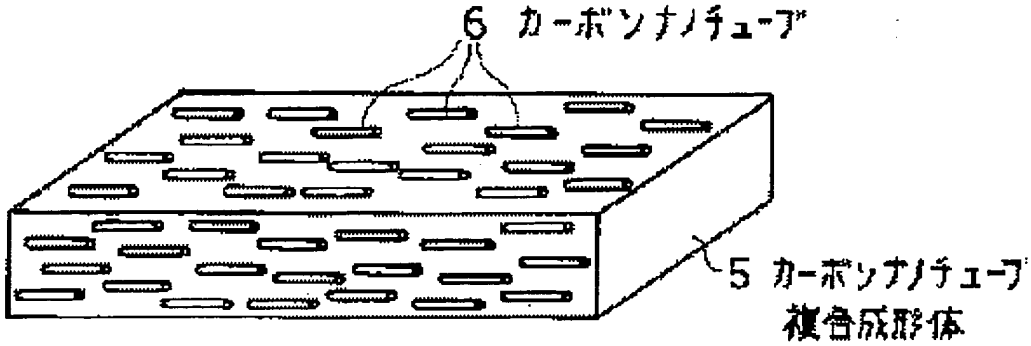
(54) CARBON NANO-TUBE COMPOSITE MOLDED OBJECT AND METHOD FOR MANUFACTURING THE SAME

(57) Abstract:

PROBLEM TO BE SOLVED: To provide a carbon nano-tube composite molded object capable of developing excellent anisotropic function not obtained heretofore with respect to properties such as electrical properties, thermal properties mechanical properties or the like, and a method for manufacturing the same.

SOLUTION: The carbon nano-tube composite molded object 5 is molded in such a state that carbon nano-tubes 6 are arranged in a matrix in a definite direction to be compounded

with the matrix. As the matrix, at least one kind of an organic polymer selected from a thermoplastic resin, a curable resin, rubber and a thermoplastic elastomer is preferable. The composite molded object 5 is manufactured by injecting a composition, wherein the carbon nano- tubes 6 are contained in the matrix, in the molding recessed part of a mold and applying a magnetic field to the composition in a difinite direction by a magnet to arrange the carbon nano-tubes 6 in the definite direction to solidify the composition.



(19)

(11) Publication number: **2003096313 A**

PATENT ABSTRACTS OF JAPAN

(21) Application number: **2001295899**

(51) Intl. Cl.: **C08L101/00** C08K 7/06 C08L 65/04

(22) Application date: **27.09.01**

(30) Priority:

(43) Date of application publication: **03.04.03**

(84) Designated contracting states:

(71) Applicant: **TORAY IND INC**

(72) Inventor: **TSUKAMOTO JUN**
SANADA JUNJI

(74) Representative:

(54) POLYMER COMPOSITE

(57) Abstract:

PROBLEM TO BE SOLVED: To industrially obtain a polymer having a high carrier mobility usable as a semiconductor material.

SOLUTION: A polymer composite comprises a monolayer carbon nanotube and/or a multilayer carbon nanotube and a polymer wherein the wt.% of the carbon nanotube is from not less than 0.1% to not more than 7% to the polymer.

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(11) Publication number: **2001011344 A**

PATENT ABSTRACTS OF JAPAN

(21) Application number: **11221571**

(51) Intl. Cl.: **C09D 7/12** B05D 7/24 C09D 4/02

(22) Application date: **30.06.99**

(30) Priority:

(43) Date of application publication: **16.01.01**

(84) Designated contracting states:

(71) Applicant: **NEC CORP**

(72) Inventor: **NIHEI FUMIYUKI**

(74) Representative:

(54) COATING AND FILM FORMED USING THE SAME AND THEIR PRODUCTION

(57) Abstract:

PROBLEM TO BE SOLVED: To obtain a coating which can uniformly form a mono-layered nanotube-containing substance layer on a large area surface or a non-flat surface and whose cost can be lowered, by dispersing mono-layered nanotube in a solution containing an organic polymer material.

SOLUTION: This coating is obtained by dispersing (B) mono-layered nanotube (preferably mono-layered carbon nanotube) in (A) a solution containing an organic polymer material (preferably polymethyl methacrylate). The solution contains the component A in an amount of 1 to 50 v/v% based on the solvent and the component B in an amount of 0.1 to 10 w/w%. The coating is preferably provided with a process for dispersing the component B in a solution containing the component A with ultrasonic waves, for example, under an ultrasonic wave treatment condition

in an output power of 200 W for about 2 hr.

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(11) Publication number: **2002313147 A**

PATENT ABSTRACTS OF JAPAN

(21) Application number: **2001116248**

(51) Intl. Cl.: **H01B 7/08**

(22) Application date: **16.04.01**

(30) Priority:

(43) Date of application publication: **25.10.02**

(84) Designated contracting states:

(71) Applicant: **SHIMADZU CORP**

(72) Inventor: **ONO SHIGEKI**

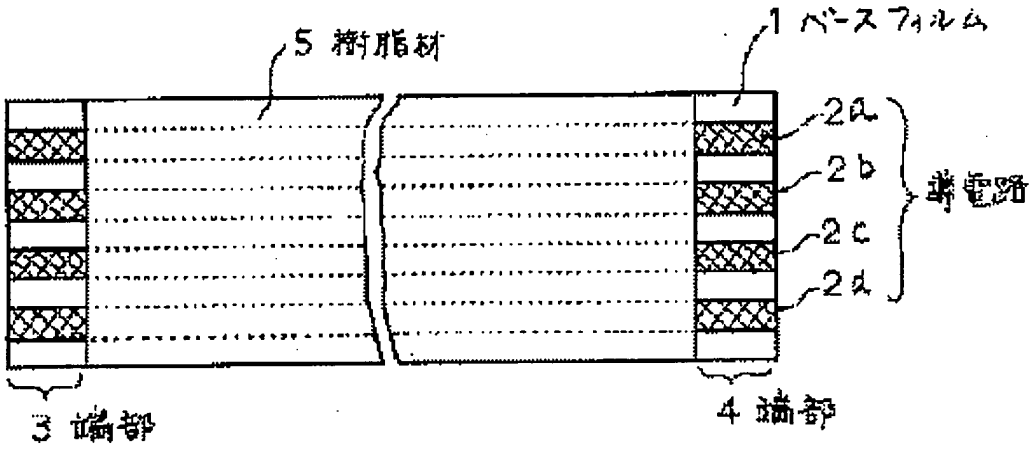
(74) Representative:

(54) FLAT CABLE

(57) Abstract:

PROBLEM TO BE SOLVED: To provide a low-cost flat cable excellent in electric characteristics, flexibility and durability, by doing away with etching treatment.

SOLUTION: A conductive paste 26 kneaded with carbon nanotubes generated by using catalytic reduction of carbon dioxide, arc discharge method, laser evaporation method, CVD method, or pyrolysis with a binder-use polymer made of thermoplastic resin as a conductive filler under certain physical conditions, is printed on a base film 1 of polyimide, polyester or the like with a screen printer to form conductive ways (2a to 2d). Since physical and electric characteristics of the conductive ways are improved due to adhesiveness of this conductive filler, it becomes possible to form microscopic conductive ways.


1 ベースフィルム
5 樹脂材
2a
2b
2c
2d
導電部
3 端部
4 端部

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(11) Publication number: **2003146632 A**

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PATENT ABSTRACTS OF JAPAN

(21) Application number: **2001351315**

(51) Intl. Cl.: **C01B 31/02** D01F 9/22

(22) Application date: **16.11.01**

(30) Priority:

(43) Date of application publication: **21.05.03**

(84) Designated contracting states:

(71) Applicant: **JAPAN ATOM ENERGY RES INST**

(72) Inventor: **ABE HIROYUKI**
MAEKAWA YASUNARI

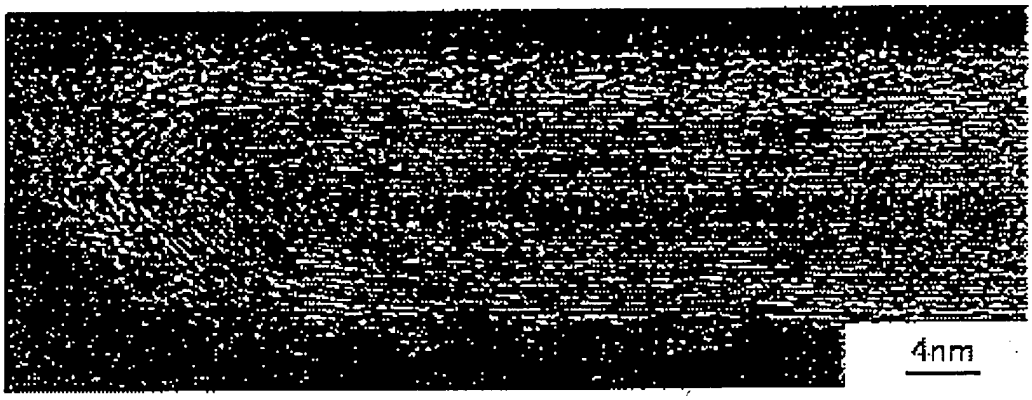
(74) Representative:

(54) METHOD FOR MANUFACTURING CARBON NANOTUBE USING TEMPLATE

(57) Abstract:

PROBLEM TO BE SOLVED: To manufacture carbon nanotubes in a high yield and with high purity and to control their shapes by using a new method utilizing a template.

SOLUTION: The carbon nanotubes are manufactured by filling a monomer in a template having holes and/or recessions with diameters of several to several hundreds of nanometers, polymerizing the monomer and carbonizing or graphitizing the polymer or by filling the polymer and/or an oligomer therein and carbonized or graphitizing them. Also the shapes of the carbon nanotubes are controlled by controlling the shapes of the holes and/or recessions of the template.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